

Abstract

Disclosed is a linear actuator which includes a core, a coil, a magnet assembly, and a housing. The coil that is shaped to be positioned about the core for movement along a longitudinal axis of the core. The housing is supported by core flanges and positioned about the coil and the core. The magnet assembly includes magnets of the same polarity facing the coil and shaped to be positioned inside or outside of the coil, and supported by the core or by the housing, respectively. The core includes first and second portions, each having an end face, and the first and second portions are positioned along the longitudinal axis so that the end faces oppose each other and are separated by a gap. A cavity is formed in each of the end faces along the longitudinal axis.